

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Franco Castellini  
Serial No. : Unknown  
Filed : Herewith  
Title : APPARATUS AND METHOD FOR DETECTING  
BIOFILM IN THE WATER CONDUITS OF  
DENTAL UNITS  
Attorney Docket : BUG 2 0150  
Assistant Commissioner For Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to substantive examination of the above-identified patent application, please amend the application as follows:

IN THE CLAIMS:

Please amend claims 6, 10, 13, 16-20, 22, 23, 25, 33-36, and 39 as follows:

6. (Amended) The apparatus according to claim 2, wherein the detecting means comprise at least the conduit portion, which is transparent to allow a direct visual check, and feed means for introducing a reagent or coloring fluid connected to, and acting on, the transparent conduit portion.

10. (Amended) The apparatus according to claim 1, wherein the detecting means comprise optical means located and operating at the transparent conduit portion and designed to emit a light beam before and after the reagent or coloring fluid is introduced so as to reveal a change in the color and/or transparency of the biofilm at least inside the conduit portion.

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this Preliminary Amendment is being deposited with the United States Postal Service on Dec 4 2001, in an envelope as "Express Mail Post Office to addressee" Mailing Label Number 9530596109US, addressed to the U.S. Patent and Trademark Office, Box 2327, Arlington, VA 22202

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13. (Amended) The apparatus according to claim 1, wherein the detecting means comprise means for detecting electrical parameters and in that the reagent substance is an electrolyte.

16. (Amended) The apparatus according to claim 14, wherein the sensor is connected to a corresponding control unit for reading, comparing and checking the electrical parameter detected; the control unit being in turn connected to alerting means activated by the control unit itself through a signal generated by the control unit when the value of the reading differs from the preset reference value.

17. (Amended) The apparatus according to claim 12, wherein the alerting means consist of an audible warning device.

18. (Amended) The apparatus according to claim 12, wherein the alerting means consist of a warning light device.

19. (Amended) The apparatus according to claim 12, wherein the alerting means consist of an alphanumeric display unit to display the value of the reading.

20. (Amended) The apparatus according to claim 12, wherein the alerting means consist of an alphanumeric display unit to display a reference message corresponding to the result of the reading.

22. (Amended) The apparatus according to claim 1, wherein the conduit portion forms an extension of one of the conduits that supply the handpieces and is equipped with an independent drain.

23. (Amended) The apparatus according to claim 1, wherein the conduit portion is a part of a conduit that supplies one of the handpieces.

25. (Amended) The apparatus according to claim 5, wherein the sample elements are housed in a container fitted inside the conduit portion in such a way as to permit the operating fluid to flow normally through the dental unit.

33. (Amended) The method according to claim 30, wherein the detecting step consists in observing the optical parameter which is visually perceptible.

34. (Amended) The method according to claim 30, wherein the detecting step consists in measuring the optical parameter.

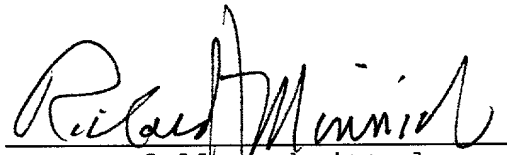
35. (Amended) The method according to claim 31, wherein the optical parameter is at least the coloring of the biofilm.

36. (Amended) The method according to claim 31, the optical parameter is the transparency of the biofilm.

39. (Amended) The method according to claim 37, wherein the detecting step comprises a step of measuring electrical parameters.

#### REMARKS

It is respectfully submitted that the subject application is now in better condition for examination.



Respectfully submitted,  
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VERSION WITH MARKINGS SHOWING CHANGES MADE

6. (Amended) The apparatus according to [claims 2 and 3] claim 2, wherein the detecting means comprise at least the conduit portion, which is transparent to allow a direct visual check, and feed means for introducing a reagent or coloring fluid connected to, and acting on, the transparent conduit portion.

10. (Amended) The apparatus according to [claims 1 to 3] claim 1, wherein the detecting means comprise optical means located and operating at the transparent conduit portion and designed to emit a light beam before and after the reagent or coloring fluid is introduced so as to reveal a change in the color and/or transparency of the biofilm at least inside the conduit portion.

13. (Amended) The apparatus according to [claims 1, 2 and 4] claim 1, wherein the detecting means comprise means for detecting electrical parameters and in that the reagent substance is an electrolyte.

16. (Amended) The apparatus according to [claims 14 and 15] claim 14, wherein the sensor is connected to a corresponding control unit for reading, comparing and checking the electrical parameter detected; the control unit being in turn connected to alerting means activated by the control unit itself through a signal generated by the control unit when the value of the reading differs from the preset reference value.

17. (Amended) The apparatus according to [claims 12 and 16] claim 12, wherein the alerting means consist of an audible warning device.

18. (Amended) The apparatus according to [claims 12 and 16] claim 12, wherein the alerting means consist of a warning light device.

19. (Amended) The apparatus according to [claims 12 and 16] claim 12, wherein the alerting means consist of an alphanumeric display unit to display the value of the reading.

20. (Amended) The apparatus according to [claims 12 and 16] claim 12, wherein the alerting means consist of an alphanumeric display unit to display a reference message corresponding to the result of the reading.

22. (Amended) The apparatus according to [any of the foregoing claims] claim 1, wherein the conduit portion forms an extension of one of the conduits that supply the handpieces and is equipped with an independent drain.

23. (Amended) The apparatus according to [any of the foregoing claims] claim 1, wherein the conduit portion is a part of a conduit that supplies one of the handpieces.

25. (Amended) The apparatus according to [claims 5 and 24] claim 5, wherein the sample elements are housed in a container fitted inside the conduit portion in such a way as to permit the operating fluid to flow normally through the dental unit.

33. (Amended) The method according to [claims 30 to 33] claim 30, wherein the detecting step consists in observing the optical parameter which is visually perceptible.

34. (Amended) The method according to [claims 30 to 33] claim 30, wherein the detecting step consists in measuring the optical parameter.

35. (Amended) The method according to [claims 31 to 34] claim 31, wherein the optical parameter is at least the coloring of the biofilm.

36. (Amended) The method according to [claims 31 to 34] claim 31, the optical parameter is the transparency of the biofilm.

39. (Amended) The method according to [claims 37 and 38] claim 37, wherein the detecting step comprises a step of measuring electrical parameters.